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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/633,463	08/07/2000	Stephen J. Orr	0100.0001080	3449

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EXAMINER
NATNAEL, PAULOS M

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

Office Action Summary	Application No.	Applicant(s)	
	09/633,463	ORR ET AL.	
	Examiner	Art Unit	
	Paulos M. Natnael	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,4,5,7-9,11 and 14 is/are rejected.

7)☒ Claim(s) 3,6,10,12,13, and 15-18 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "tuner" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "MPEG decoder 60" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1,2,4,5,7-9,11 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamir et al., U.S. Pat. No. 5,923,365.

Considering claim **1**, Tamir et al. disclose the following claimed subject matter, note;

b) the claimed method of identifying a first portion of an image is met by step 100, FIG.3A;

c) the claimed method of displaying the first portion is met by step 100, Fig. 3A;

d) the method of detecting motion of an object within the portion of the image is by step 110, fig.3A;

e) the claimed method of selecting a second portion of the image such that the object appears at least a predetermined distance from an edge of the second portion of the image; and displaying the second portion is met by steps 146,150, and 160, Fig.3A;

Except for;

a) the claimed method of beginning a zoom mode;

Regarding a), Tamir et al., does not specifically disclose a zoom mode. However, the zoom mode is well known in the art. Tamir et al., for example discloses, "The tracking procedure takes into account the fact that there may be a change of magnification (zoom in and out) and of objects' poses through the succession of frames." (col. 10, lines 10-13)

Therefore, it would have been obvious to the skilled in the art to modify the system of Tamir to provide it with a zoom mode at the beginning of the process, and

modify the system to take account of the magnification or (zoom in and out) as Tamir et al. clearly suggest.

Considering claim **2**, the claimed when at least one edge of the second portion to the image extends beyond the image, terminating the zoom mode, is met by the step 170, where the system executes an analysis of disappearance/ reentry prediction for marked objects.

Considering claim **4,** the method of claim 1, wherein the first portion of the image and the second portion of the image are MPEG2 images; and wherein the step of detecting motion of an object within the portion of the image includes a step of examining MPEG2 motion vectors is met by the disclosure that "The optibase JPG-2000 board is using Motion JPEG algorithm for compression; other algorithm, such as MPEG, may also be used. (see col. 6, lines 56-58)

Considering claim **5**, Tamir discloses the following claimed subject matter, note;
b) a video signal processor coupled to the tuner and operative to select a portion of the video image to provide a selected portion of the video image is met by Host computer 30 and the image analyzer 50 (FIG.1);

a) the video signal processor also operative, while all edges of the selected portion of the video image are within the video image to zoom to the selected portion of the video

image, to detect movement of an object within the selected portion of the video image, and to select a second portion of the video image to redefine the selected portion of the video image, is met by Host computer 30 and the image analyzer 50 (FIG.1) ; (see col. 8, lines 53-54)

Except for;

a) the claimed tuner operative to receive a video image;

Regarding a), Tamir et al. do not disclose a tuner. However, Examiner takes an Official Notice here in that a tuner is a very well known device in the art and, therefore, it would have been obvious to the skilled in the art at the time the invention was made to provide a tuner device and modify the system of Tamir et al.

Considering claim **7**, the television system of claim 5, wherein the television system is one of set top box, a desk top box, and a personal digital assistant is met by Fig.1;

Considering claim **8**, a method for providing a zoom video tracking image, comprising steps of beginning a zoom mode;

a) identifying a first portion of an image;

b) displaying the first portion in a zoom frame within a full frame of the image;

c) detecting motion of an object within the zoom frame;

d) selecting a second portion of the image such that the object appears at least a predetermined distance from an edge of the second portion of the image; and

displaying the second portion in the zoom frame.

Regarding claim 8, see rejection of claim 1;

Considering claim **9**, see rejection of claim 2;

Considering claim **11**, the method of claim 8, wherein the first portion of the image and the second portion of the image are MPEG2 images; and wherein the detecting motion of an object within the portion of the image includes a step of examining MPEG2 motion vectors.

Regarding claim **11**, see rejection of claim 4;

Considering claim **14**, Tamir et al. disclose the following claimed subject matter, note;
a) a tuner operative to receive a video image;
b) a video signal processor coupled to the tuner and operative to select a portion of a full frame of the video image to provide a selected portion of the video image;
c) the video processor also operative, while all edges of the selected portion of the video image are within the video image, to zoom to the selected portion of the video image and display in a zoom frame, to detect movement of an object within the selected portion of the video image, and to select a second portion of the video image to redefine the selected portion of the video image and display in the zoom frame.

Regarding claim 14, see rejection of claim 8;

Allowable Subject Matter

3. Claims **3,6,10,12,13, 15-18** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose a method for providing a zoom video tracking image, comprising the step of, measuring a difference between the first portion of the image and the second portion of the image; and when the difference between the first portion of the image and the second portion of the image exceeds a predetermined threshold, terminating the zoom mode, as in claim 3;

Wherein the video signal processor is further operative to determine a difference between the first portion of the video image and the second portion of the video image, and to cancel zoom in response to the difference exceeding a predetermined threshold, as in claim 6;

Measuring a difference between the first portion of the image and the second portion of the image; and when the difference between the first portion of the image and the second portion of the image exceeds a predetermined threshold, terminating the zoom mode, as in claim 10;

wherein, during panning of the image, objects within the image have larger MPEG2 motion vectors than an MPEG2 motion vector of the object within the first portion of the image, and wherein in the step of examining MPEG2 motion vectors, a

compensated MPEG2 motion vector for objects in the first potion of the image is determined by eliminating an MPEG2 motion vector of the entire portion of the image taken as a whole from the MPEG2 motion vector of the object in the first portion of the image, as in claim 12;

wherein, during panning of the image, objects within the image have larger MPEG2 motion vectors than an MPEG2 motion vector of the object within the first portion of the image, and wherein the step of examining MPEG2 motion vectors comprises determining that an object has a larger motion vector in one direction when observed in a full frame of the image, and has a smaller motion vector when observed in a zoom frame in order to identify panning of the image, as in claim 13;

wherein the video signal processor is further operative to determine a difference between the first portion of the video image and the second portion of the video image, and to cancel zoom in response to the difference exceeding a predetermined threshold, as in claim 15;

wherein the first portion of the image and the second portion of the image are MPEG2 images; and wherein the video signal processor is further operative to detect motion of an object within the portion of the image by examining MPEG2 motion vectors, as in claim 16;

wherein, during panning of the image, objects within the image have larger MPEG2 motion vectors than an MPEG2 motion vector of the object within the first portion of the image, and wherein video signal processor is further operative to determine a compensated MPEG2 motion vector for objects in the first potion of the

image by eliminating an MPEG2 motion vector of the entire portion of the image taken as a whole from the MPEG2 motion vector of the object in the first portion of the image, as in claims 17;

wherein, during panning of the image, objects within the image have larger MPEG2 motion vectors than an MPEG2 motion vector of the object within the first portion of the image, and wherein video signal processor is further operative to determine that an object has a larger motion vector in one direction when observed in a full frame of the image, and has a smaller motion vector when observed in a zoom frame in order to identify panning of the image, as in claim 18;

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Wakitani, U.S. Pat. No. 6,031,568 discloses a method moving-target tracking apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703)305-0019. The examiner can normally be reached on 6:30am -3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703)305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Paulos Natnael

January 13, 2003

JOHN MILLER
SUPERVISORY PATENT EXAMINER
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